

FIG. 2

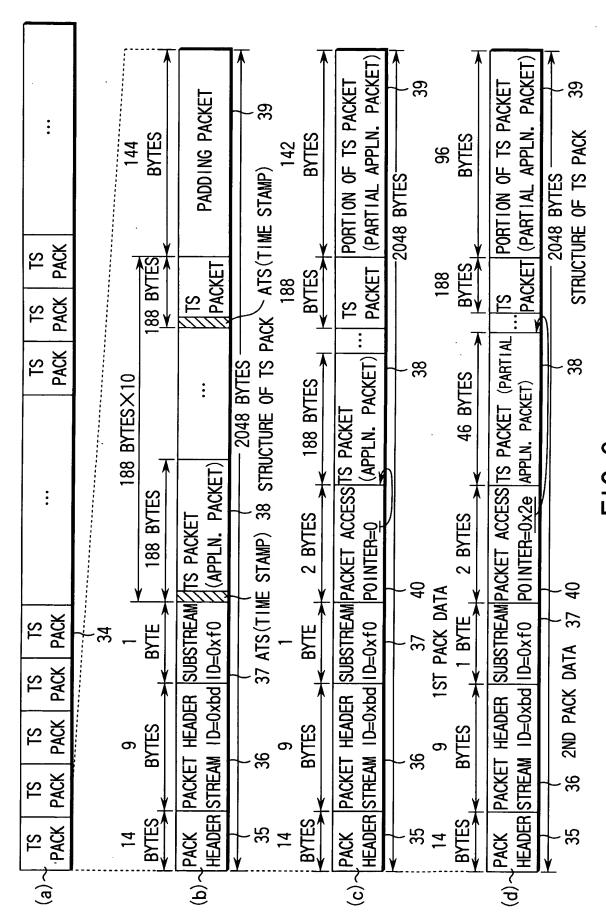
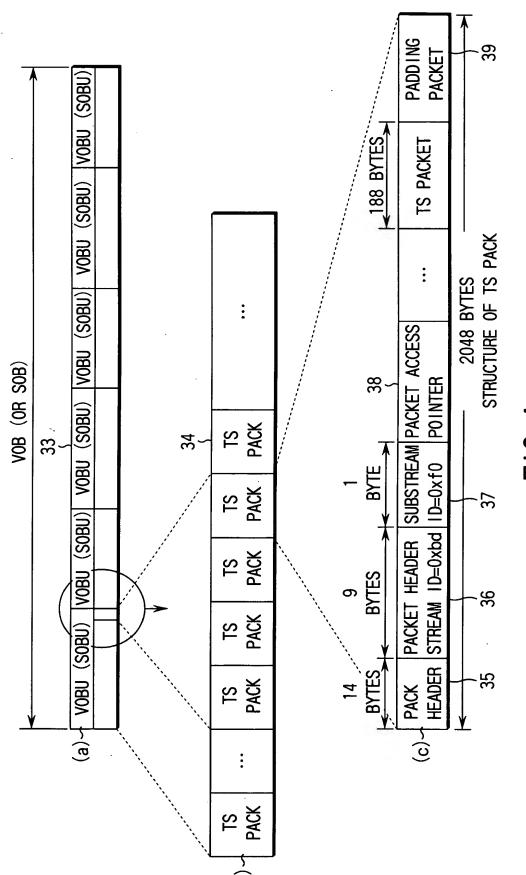


FIG. 3



F16.4

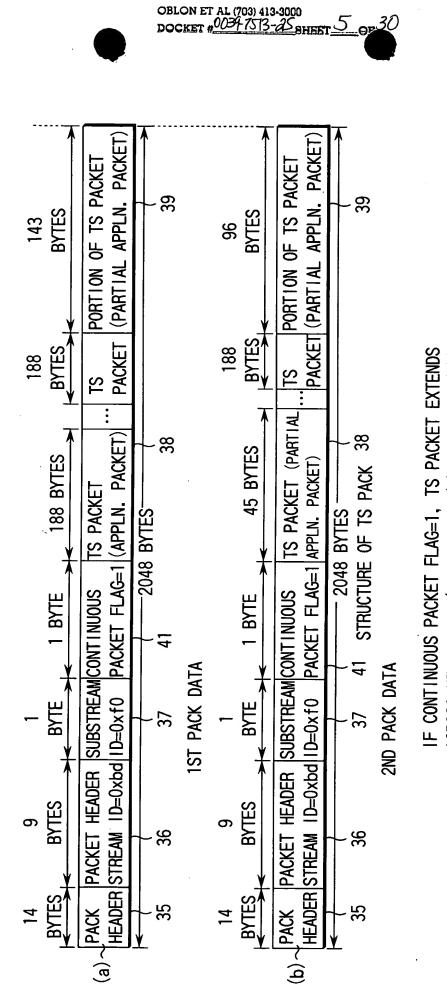


FIG. 5

ACROSS NEXT PACK (FROM 39 OF (a) TO 38 OF (b))

(b) ~\text{VTS_PGCIT (UD_PGCIT)}	(1# NC_001_00)	VTS_PGC_SRP #n (UD_PGC_SRP#n)	VTS_PGCI #1 (UD_PGCI#1)		••	VTS_PGCI #n (UD_PGCI#n)		C_PBIT (SCI)	(d)~(c_PBI #1 (SC_EPI#1)			C_PBI #j (SC_EPI#n)
VTSI (STR_VMGI; CONTROL INFO.) (a) ~ VTSI_MAT (VMGI_MAT) VTS_TT_SRPT_(PI_SRPT)	VTS_PGCIT (UD_PGCIT)	VTSM_PGC!_UT VTS_TMAPT	VTSM_C_ADT	VTSM_VOBU_ADMAP	VTS_C_ADT	VTS_V0BU_ADMAP	>	PGCI	(c) ~ PGC_G1 (SC_G1)	PGC_PGMAP (PG1#1~#m)	C_PBIT (SCI#1~#n)	C_POSIT (SCI_SRP#1~#n)

<u>=16.6</u>

PGC GI (SC GI)

		CONTENTS
(a)	PGC_CNT	NUMBER OF PROGRAMS, NUMBER OF CELLS
(0)	PGC_TRS_TM	RECORDING TIME PER PGC
*	SUPPORT INFO	SUPPORT INFORMATION (DETAILS ARE LISTED BELOW)
	PGC_PGMAP_SA	START ADDRESS OF PROGRAM MAP
	C_PBIT_SA	START ADDRESS OF C_PBIT
	C_POSIT_SA	START ADDRESS OF C_POSIT
	ARCHIVE FLAG	ERASE INHIBITION FLAG
	(C_TY1 & TE)	0: FREE, 1: SAVE PERMANENTLY
	SC_EPI_Ns	NUMBER OF ENTRY POINT INFORMATION
	SOB_N	STREAM OBJECT NUMBER
	SC_S_APAT	STREAM CELL START APAT
	SC_E_APAT	STREAM CELL END APAT
	if (TE=='10b') {	
	ERA_S_APAT	ERASE START APAT
	ERA_E_APAT	ERASE END APAT
•	h7 ` hE	h/ h2 h2 h1 h0

	<u>b/</u> !	<u>ე</u>	b4	<u>b3</u>	<u>b2</u>	<u>b1</u>	b0
(b)	IDENTIFICATION	N			DAT	#	RANDOM
	CODE OF STB THAT RECORDED			PCR	DMT		ACCESS
	DATA	,	SUPPURI	SUPPURI	SUPP0RT	ISHPPART I	INDICATOR SUPPORT

RANDOM ACCESS INDICATOR SUPPORT FLAG Ob ... NOT SUPPORTED, 1b···SUPPORTED UNIT START INDICATOR SUPPORT FLAG 0b···NOT SUPPORTED, 1b···SUPPORTED PAT. PMT SUPPORT FLAG Ob...NOT SUPPORTED. 1b···SUPPORTED PCR SUPPORT FLAG Ob...NOT SUPPORTED. 16···SUPPORTED SCD SUPPORT FLAG Ob...NOT SUPPORTED. 16···SUPPORTED PCR=PRESENTATION CLOCK REFERENCE

SCD=SPLICE COUNTDOWN

STB IDENTIFICATION CODE
001:STB OF BS DIGITAL BROADCAST
010:Ver2 STB OF DirecTV
011:Ver1 STB OF SKY PERFECT TV
C_TY1...'010b' SHALL BE DESCRIBED
FOR ALL STREAM CELLS
TE...'00b':THIS CELL IS IN THE
"NORMAL" STATE

'01b':THIS CELL IS IN "TEMPORARILY ERASED" STATE; AND THIS CELL STARTS AFTER THE FIRST APPLICATION PACKET OF A SOBU AND ENDS BEFORE THE LAST APPLICATION PACKET OF THE SAME SOBU

'10b':THIS CELL IS IN "TEMPORARILY
ERASED" STATE; AND THIS CELL
CONTAINS AT LEAST ONE SOBU
BORDER (FIRST OR LAST
APPLICATION PACKET OF A
SOBU). ERA_S_APAT AND
ERA_E_APAT EXIT FOR THIS CELL

C_PBI (SCI)

4	
4	
-10	

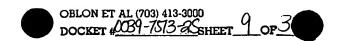
	CONTENTS	NUMBER OF BYTES
C_CAT (C_TY)	CELL TYPE 02: STREAMER CELL	
	STC VALUE OR PCR UPON RECORDING HEAD OF CELL OF INTEREST	
C_FV0BU_SA	START ADDRESS OF CELL	
C_LV0BU_SA	START ADDRESS OF LAST VOBU OF CELL	
C_LV0BU_EA	END ADDRESS OF LAST VOBU OF CELL	
TS PACKET LENGTH	TS PACKET LENGTH: NORMAL: 0xbc	
REFPIC_Ns (AU_Ns)	NUMBER OF 1-PICTURES	
REFPIC_SA_#1 (AUSM) STA	START ADDRESS OF 1-PICTURE #1	
C_EA_#1 (AUEM)	REFPIC_EA_#1 (AUEM) END ADDRESS OF I-PICTURE #1	
23+(n-1) X8 REFPIC_SA_#n (AUSM) ST,	START ADDRESS OF 1-PICTURE #n	
27+(n-1) X8 REFPIC_EA_#n (AUEM) END	END ADDRESS OF 1-PICTURE #n	
	T0TAL	30+(n-1) X8

REFPIC_NS: NUMBER OF I-PICTURES ("0" IF NO RANDOM ACCESS INDICATOR IS AVAILABLE) REFPIC_SA#n: ADDRESS OF TS PACK INCLUDING FIRST TS PACKET OF I-PICTURE #n

(TS PACK WITH ACTIVE RANDOM ACCESS INDICATOR)

REFPIC_EA#n: ADDRESS OF TS PACK INCLUDING LAST TS PACKET OF I-PICTURE #n (TS PACK WITH ACTIVE UNIT START INDICATOR)

("0" IF NO UNIT START INDICATOR IS AVAILABLE)



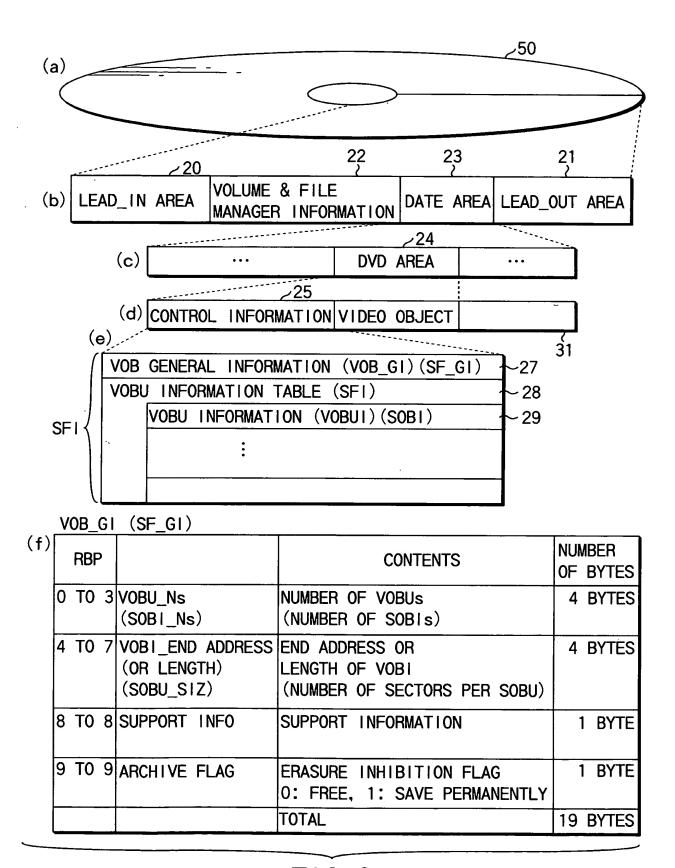


FIG.9

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	7	
`	_	_
	ĭ	2
	>	-

RBP		CONTENTS	NUMBER OF BYTES
0 T0 3	VOBU START ADDRESS	VOBU START ADDRESS OF VOBU	
4 T0 7	VOBU END ADDRESS (OR LENGTH)	END ADDRESS OR LENGTH OF VOBU	
8 TO 11	VOBU_RECTM	STC VALUE OR PCR UPON RECORDING HEAD OF VOBU OF INTEREST	
12 T0 13	TS PACKET LENGTH	TS PACKET LENGTH: NORMAL: 0xbc	
14 T0 17	REFPIC_Ns (AU_Ns)	NUMBER OF 1-PICTURES	
18 T0 21	REFPIC_SA_#1 (AUSM)	REFPIC_SA_#1 (AUSM) START ADDRESS OF I-PICTURE #1	
22 T0 25	REFPIC_EA_#1 (AUEM) END	END ADDRESS OF I-PICTURE #1	
	•••		
$16+(n-1) \times 8$	REFPIC_SA_#n (AUSM)	16+(n-1) X8 REFPIC_SA_#n (AUSM) START ADDRESS OF I-PICTURE #n	
$20+(n-1)\times8$	$20+(n-1)\times8$ REFPIC_EA_#n (AUEM) END	END ADDRESS OF 1-PICTURE #n	
		TOTAL	25+(n-1) X8

REFPIC_NS: NUMBER OF I-PICTURES ("O" IF NO RANDOM ACCESS INDICATOR IS AVAILABLE) REFPIC_SA#n: ADDRESS OF TS PACK INCLUDING FIRST TS PACKET OF I-PICTURE #n

(TS PACK WITH ACTIVE RANDOM ACCESS INDICATOR)

REFPIC_EA#n: ADDRESS OF TS PACK INCLUDING LAST TS PACKET OF I-PICTURE #n (TS PACK WITH ACTIVE UNIT START INDICATOR)

("0" IF NO UNIT START INDICATOR IS AVAILABLE)

	_	,	-								_
	CELL	PAT PMT							PG	PAT PMT	
	CELL	PAT PMT							PG	PAT PMT	
	CELL	PAT PMT		0_0	NG			S	PG	PAT PMT	
32	CELL	PAT PMT	- م	INSERT PADDING PACKET TO	ALIGN TS PACKET INCLUDING	PAT TO HEAD OF PACK		DBG	9d	PAT PMT	,
	CELL	PAT PMT		INSERT PA	ALIGN TS	PAT T0 HE			PG	PAT PMT	
	CELL	(a) ∼PAT PMT		IN WHICH TS	PACKET INCLUDING PAT	ED TO HEAD OF			PG	(b) ~PAT PMT	
		(a)		TS PACK	PACKET II	IS ALIGNE	PACK			ر(q)	
										_	\ \ \ \ \

PGC	PGC	PGC	Sec	PGC	PGC
(c) ~PAT PMT	PAT PMT				
		ŗ			

ALIGN TS PACKET INCLUDING

PAT TO HEAD OF PACK

IS ALIGNED TO HEAD OF

TS PACK IN WHICH TS PACKET INCLUDING PAT

INSERT PADDING PACKET TO

INSERT PADDING PACKET TO PACKET INCLUDING PAT TS PACK IN WHICH TS

ALIGN TS PACKET INCLUDING PAT TO HEAD OF PACK IS ALIGNED TO HEAD OF

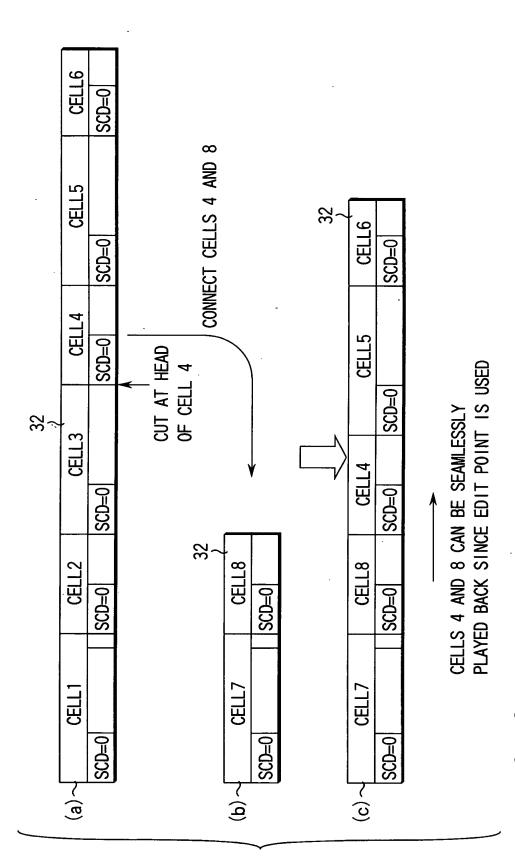
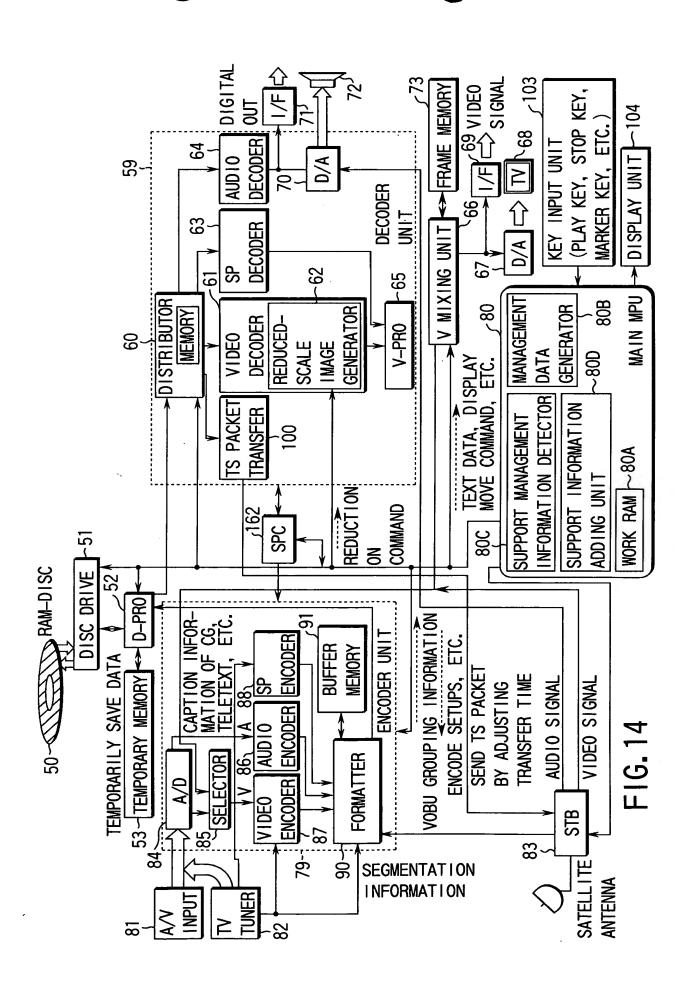
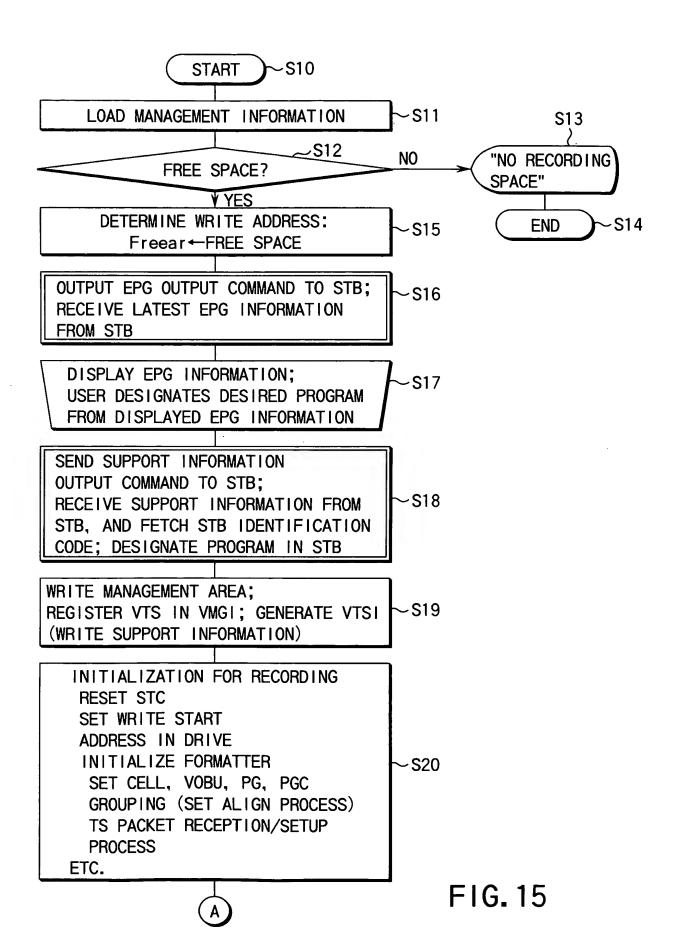
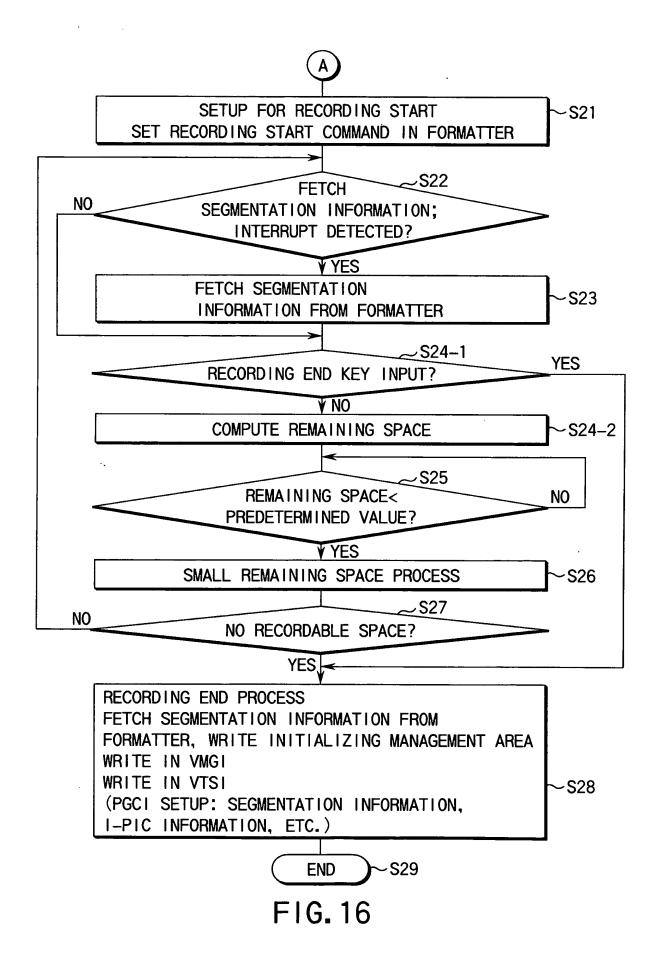
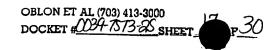


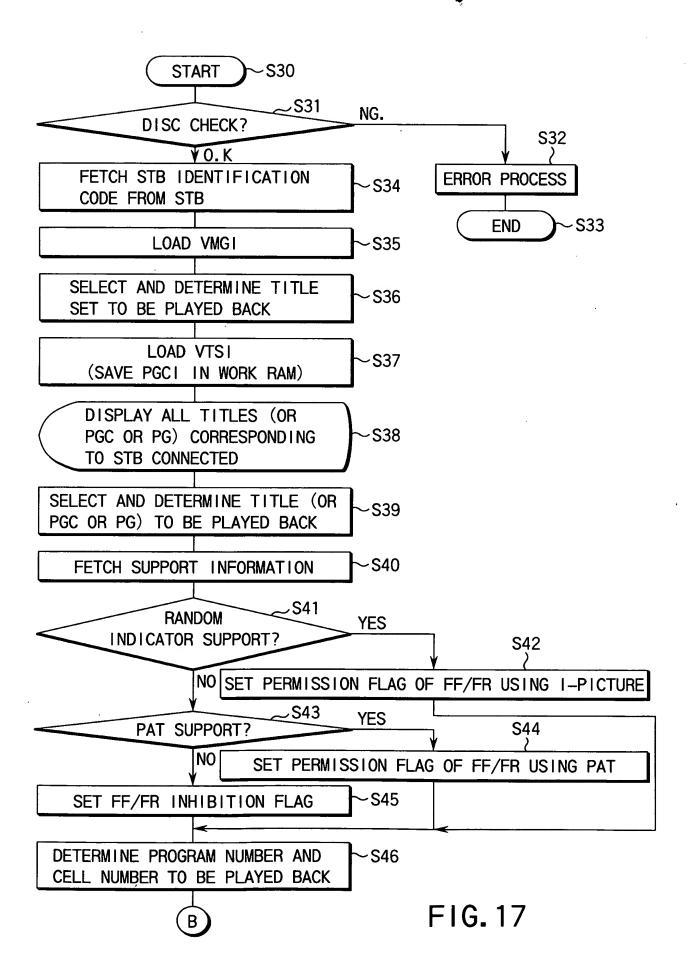
FIG. 13











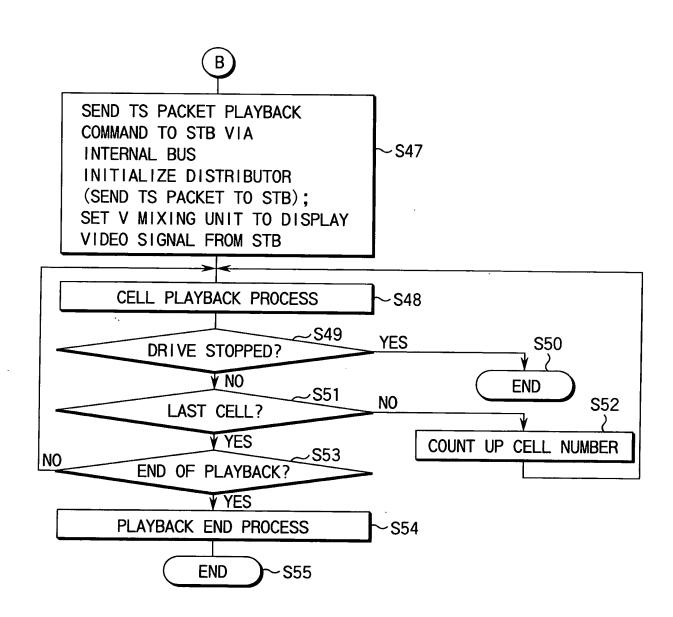
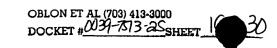
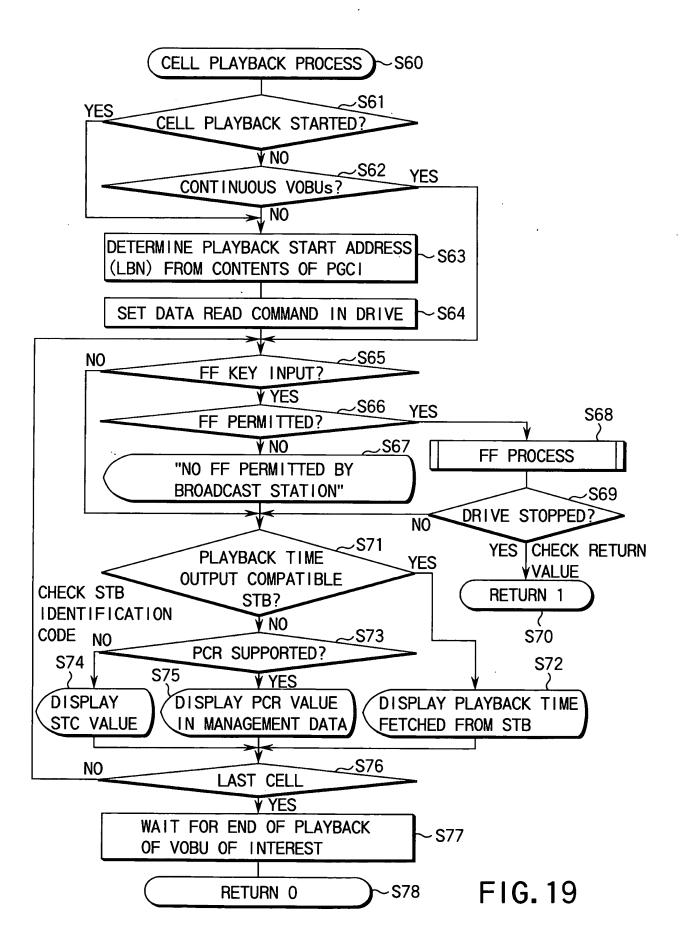
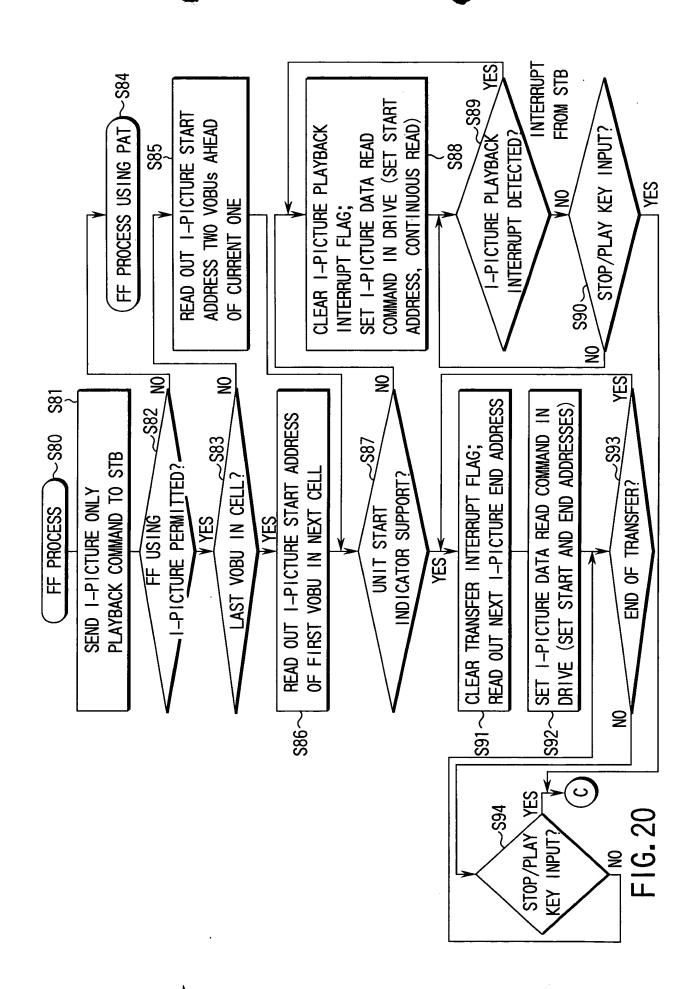


FIG. 18







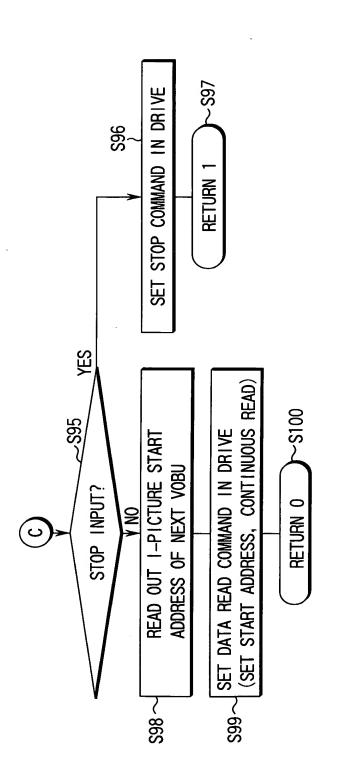
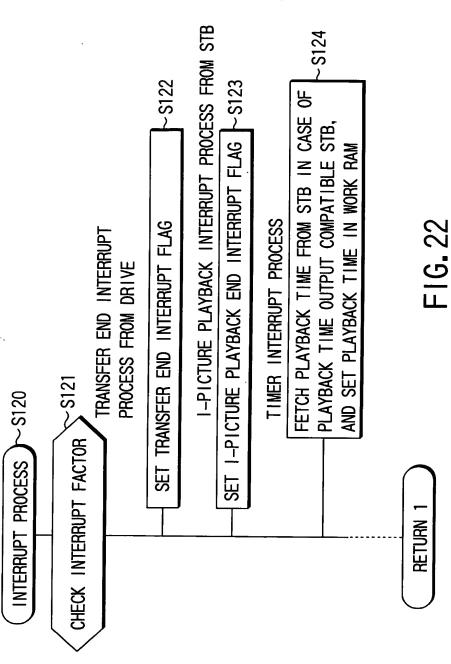


FIG. 21



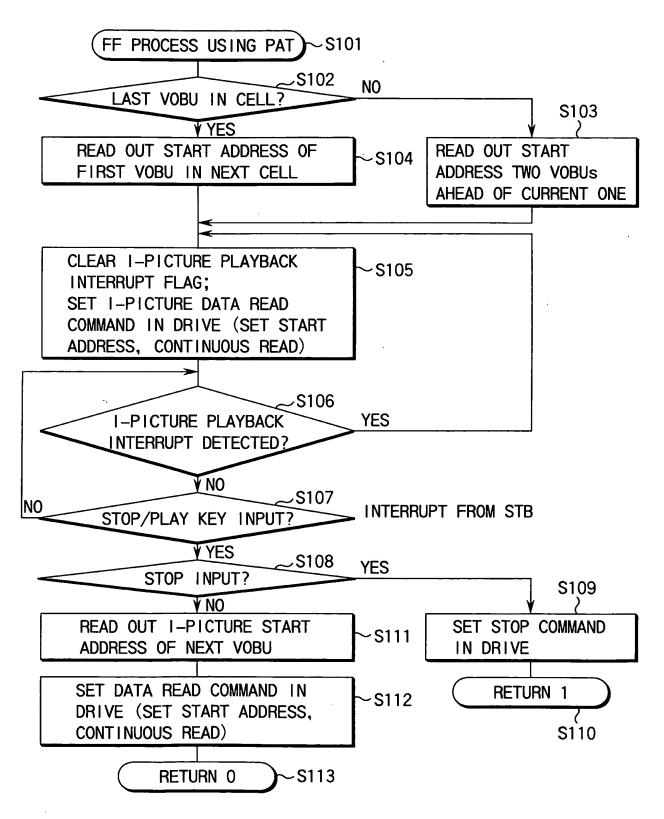
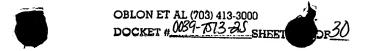


FIG. 23

	TIME-	TRANS-	TII	ME-	TRANS-	-] [TIME-	TR	ANS-	lΓ	TIME-	- TR	ANS-	
(a)	STAMP	PORT	ST	AMP F	PORT		STAMP	- 1	RT		STAME	PO	RT.	
(0)	ATS	PACKET	AT:	S F	PACKE	г	ATS		CKET		ATS	1	CKET	
	a	а		b	b		d	1	d		f		f	
			/	- /										Ь
	TIME-	TRANS-	TIME	_ 1 1	TRANS-] [TRANS-	TŤ.	TRA	NS.	- END	PAI	DDIN	G
(b)		P0RT	STAM	1 1	PORT		PORT		POR			E ARI		۱
(p)	ATS	PACKET		1 1	PACKE		PACKE	r	PAC				 36	
	a	а	b		d		d		f		. • .			
						با لب		- 		::::				믁
	PACK	PES	STRE/	MDA	TA PA	CK	PES	- (SECTO	R	DATA		DAT	ΑÌ
(c)	HEADER			1			RHEAD				AREA		ARE	
(6)	1		HEADE			2	7	- 1	HEADE		22	•••	23	
			11			_		Ī	12					ı
											<u> </u>			극
(d)	SECTOR	SECTOR	}		SECT	OR S	SECTOR	R SE	CTOR			SE	СТОІ	R
~	NO. 0	NO. 1	.		NO. 1	5	VO. 16	NC	. 17			NO). 31	ı
	ECC B	LOCK	ECC E	BLOCK	EC	C B	LOCK	EC	C BL	0C	K E	CC B	LOCK	
(é)	# 0	Y	#,	ß		# ₂	/		#8			# 6	:	
<u>_</u>	STF	REAM BL	.OCK #	1			ST	REA	M BL	OCI	< #2			
(f)					-	-								\exists
```				STR	REAM C	BJE	CT #A	29	8					
														$\exists$
, ,			OCK #						M BL					╝
(â)	ECC B		ECC E		EC		LOCK	EC	C BL	OCI	K E	CC B		
	# 0	Y	# /	B		<u>#յ</u>	<u>/</u>		#8			#ε	:	╝
ı						<u> </u>								
(ḥ)	SECTOR		}  ··	• •			SECTOF	}	• • • •	- 1	SECT0	- 1		٦
	NO. 32	NO. 33		• •	NO. 47	/	NO. 48		• • • •		NO. 78	NC	. 79	╛
1	DAOK			OF OT					70					_
	PACK	PES		SECT				ATA		AC			DING	
(i)	HEADEF		EK		HEAD	EK	1	REA			DER	PAC		
)	3	8			12			24		4		4	U	ᆜ
(j)		TDANG	DODT.	END	CODE	DAT	DIMO	, 1	DEC	1 15	ADED	DAD	OLM	$\overline{}$
\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		l .	SPORT		CODE				PES		EADER	1	DING	
1	••••	PACK	II Z		32	AKt	EA 37			9		JAKE	A 38	5

FIG. 24



(a)~			STREAM	BLOCK	HEAL	DER 11				
(b)~	TRANSPORT PACKET INFOR- MATION 611		STREAM INFORM 61		•		HEAI	TOR DATA DER DRMATION 613		
(c)~	TRANSPORT PACKET INFOR- MATION 621	TIME	TRANSPORT PACKET ATTRI- BUTION 623	STREAM BLOCK STZE	DIFI TIMI	CK	ACCESS POINT	TRANSPORT PACKET CONNECTION FLAG 627		
(d)~	NUMBER PACKET		NSPORT			PORT PA 632	CKET MAPPING			
(e)~	I-PICTURE MAPPING TABLE 641	CTURE B,P-PICTURE ING START POSITION MAPPING TABLE			VIDEO AUDIO PACKET PACKET MAPPING MAPPING TABLE 643 TABLE 6			G INFORMATION		
·			·F	IG. 2	25					

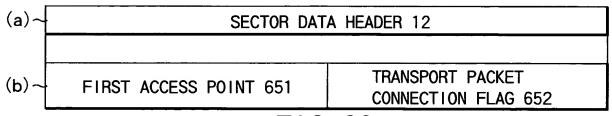


FIG. 26

## CONSTRAINTS ON MPEG SPECIFICATIONS FOR SOB

SYSTEM HEADER	SHALL NOT BE INCLUDED	
SCR VALUE IN THE FIRST PACK OF A SOB	ANY VALUE	
MPEG PROGRAM_END_CODE	SHALL NOT BE INCLUDED	
STREAM_ID	SHALL BE EQUAL TO BFh (PRIVATE_STREAM_2) IN ALL PES PACKETS	

STREAMER
INFORMATION
(STRI)

STREAMER VIDEO MANAGER INFORMATION (STR_VMGI)

STREAM FILE INFORMATION TABLE (SFIT)

ORIGINAL PGC

INFORMATION (ORG_PGCIT)

USER DEFINED PGC INFORMATION TABLE (UD_PGCIT)

TEXT DATA MANAGER (TXTDT_MG)

APPLICATION PRIVATE DATA MANAGER (APDT MG)

VIDEO MANAGER INFORMATION MANAGEMENT TABLE (VMGI MAT)

PLAY_LIST SEARCH POINTER TABLE (PL_SRPT)

FIG. 28

STREAMER VIDEO MANAGER INFORMATION (STR_VMGI)

STREAM FILE INFORMATION TABLE (SFIT)

ORIGINAL PGC INFORMATION (ORG PGCI)

USER DEFINED PGC INFORMATION TABLE (UD_PGCIT)

TEXT DATA MANAGER (TXTDT_MG)

APPLICATION PRIVATE DATA MANAGER (APDT_MG)

STREAM FILE INFORMATION
TABLE INFORMATION (SFITI)

STREAM OBJECT STREAM
INFORMATION #1 (SOB_STI #1)

STREAM OBJECT STREAM INFORMATION #n (SOB_STI #n)

STREAM FILE INFORMATION (SFI)

FIG. 29

STREAM FILE INFORMATION
TABLE INFORMATION (SFITI)

STREAM OBJECT STREAM
INFORMATION #1 (SOB_STI #1)

STREAM OBJECT STREAM INFORMATION (SOB_STI #n)

STREAM FILE INFORMATION (SFI)

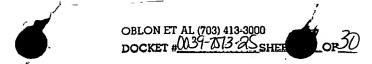
STREAM FILE GENERAL INFORMATION (SF_GI)

STREAM OBJECT INFORMATION
SEARCH POINTER #1 (SOBI_SRP #1)

STREAM OBJECT INFORMATION
SEARCH POINTER #n (SOBI_SRP #n)

STREAM OBJECT INFORMATION #1 (SOBI #1)

STREAM OBJECT INFORMATION #n (SOBI #n)



## STREAM FILE GENERAL INFORMATION (SF_GI)

	CONTENTS	NUMBER OF BYTES
(1) SOBI_Ns	NUMBER OF SOBIS	2
(2) SOBU_SIZ	NUMBER OF SECTORS PER SOBU	2
(3) MTU_SHFT	MAPPING TIME UNIT SHIFT	1
(4) RESERVED	RESERVED	1
	TOTAL	6

FIG. 31

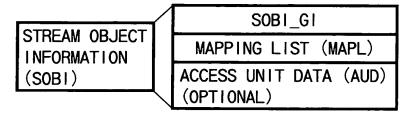
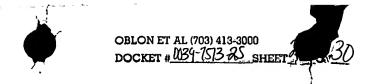


FIG. 32

## STREAM OBJECT INFORMATION GENERAL INFORMATION (SOBI_GI)

	CONTENTS	NUMBER OF BYTES
(1) SOB_TY	SOB TYPE	1
(2) SOB_REC_TM	SOB RECORDING TIME	5
(3) SOB_ST1_N	SOB STREAM INFORMATION NUMBER	1
(4) AUD_FLAGS	ACCESS UNIT DATA FLAGS	1
(5) SOB_S_APAT	SOB START APAT	6
(6) SOB_E_APAT	SOB END APAT	6
(7) SOB_S_SOBU	FIRST SOBU OF THIS SOB	4
(8) MAPL_ENT_Ns	NUMBER OF MAPPING LIST ENTRIES	4
	TOTAL	28



ACCESS UNIT DATA (AUD) (OPTIONAL)

FIG. 34

ACCESS UNIT GENERAL
INFORMATION (AU_GI)

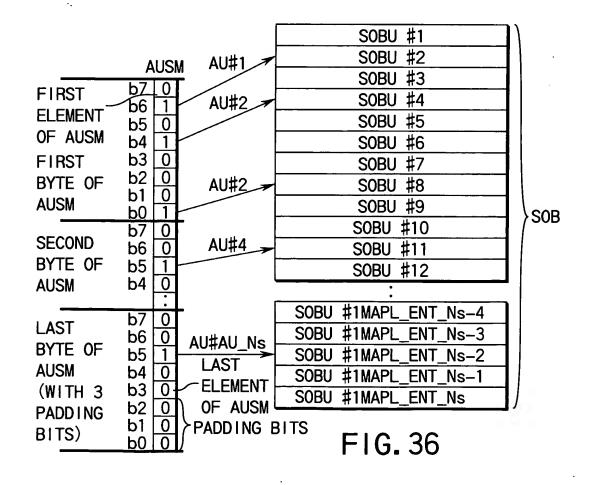
ACCESS UNIT END MAP
(AUEM) (OPTIONAL)

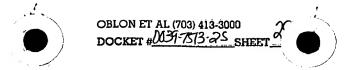
PRESENTATION TIME STAMP
LIST (PTSL) (OPTIONAL)

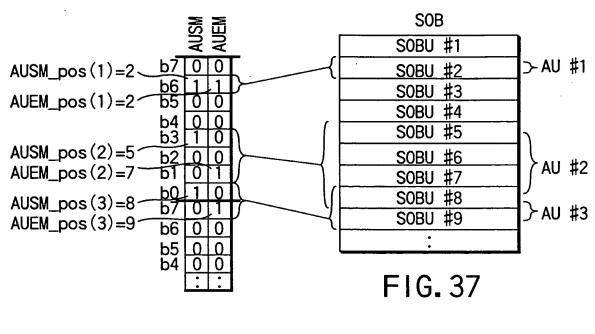
ACCESS UNIT GENERAL INFORMATION (AU_GI)

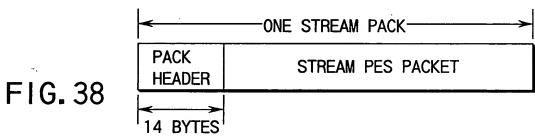
	CONTENTS	NUMBER OF BYTES	
(1) AU_Ns	NUMBER OF ACCESS UNITS	4 .	
(2) AUSM	ACCESS UNIT START MAP (MAP_ENT_Ns ELEMENTS)	(MAPL_ENT_Ns+7) div 8	
	TOTAL	(MAPL_ENT_Ns+7) div 8 + 4	

FIG. 35

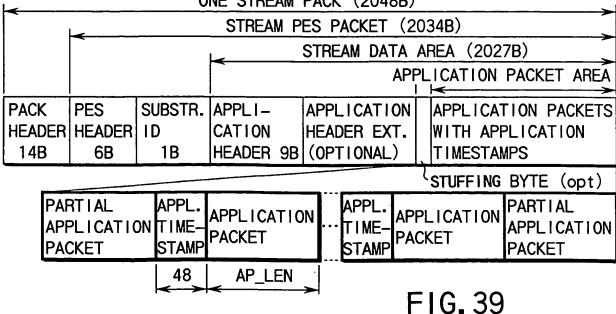


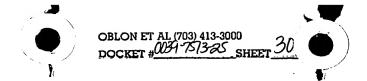






STRUCTURE OF THE STREAM DATA AREA WITHIN A STREAM PES PACKET
ONE STREAM PACK (2048B)





## APPLICATION HEADER

FIELD		NUMBER OF BYTES	VALUE	COMMENT
(1) VERSION	8	1	01h	
(2) AP_Ns	8	1		
(3) FIRST_AP_OFFSET	16	2		
(4) EXTENSION_HEADER_INFO	2		00b, 10b, 11b	
(5) RESERVED FOR CCI_ESC	1	1	0b 0R 1b	
(6) RESERVED	5		11111b	
(7) SERVICE_ID	16	2		
(8) MAX_BR_LOG2	8	1		
(9) SMO_BS_LOG2	8	1		
	TOTAL	9		

FIG. 40